

TABLE I: A comparison of the numbers of events predicted by the SM and the observations for the $\ell\gamma E_T$ signature. The SM predictions are dominated by $W\gamma$ and $Z\gamma$ production [35–37]. Other contributions come from $W\gamma\gamma$ and $Z\gamma\gamma$, leptonic τ decays, and misidentified leptons, photons, or E_T .

Lepton+Photon+E_T Events, $\mathcal{L} = 929 \text{ pb}^{-1}$			
SM Source	$e\gamma E_T$	$\mu\gamma E_T$	$(e + \mu)\gamma E_T$
$W^\pm\gamma$	41.65 ± 4.84	29.85 ± 5.62	71.50 ± 10.01
$Z/\gamma^* + \gamma$	3.65 ± 1.31	14.10 ± 2.36	17.75 ± 3.65
$W^\pm\gamma\gamma$	0.32 ± 0.04	0.18 ± 0.03	0.50 ± 0.06
$Z/\gamma^* + \gamma\gamma$	0.09 ± 0.01	0.38 ± 0.05	0.47 ± 0.06
$t\bar{t}\gamma$	0.88 ± 0.12	0.54 ± 0.08	1.42 ± 0.19
$\ell e E_T, e \rightarrow \gamma$	9.59 ± 0.76	1.43 ± 0.23	11.02 ± 0.81
$W^\pm + \text{Jet faking } \gamma$	21.5 ± 4.8	6.2 ± 3.6	27.7 ± 6.0
$W^\pm\gamma, Z/\gamma^* + \gamma \rightarrow \tau\gamma$	2.15 ± 0.56	0.76 ± 0.24	2.91 ± 0.65
QCD (Jets faking $\ell + E_T$)	15.0 ± 4.1	$0.0^{+0.1}_{-0.0}$	15.0 ± 4.1
DIF (Decays-In-Flight)	—	2.3 ± 0.7	2.3 ± 0.7
Total SM			
Prediction	94.8 ± 8.1	55.7 ± 7.1	150.6 ± 13.0
Observed in Data	96	67	163

TABLE II: A comparison of the numbers of events predicted by the SM and the observations for the $\ell\ell\gamma$ signature. The SM predictions are dominated by $Z\gamma$ production [35–37]. Other contributions come from $Z\gamma\gamma$, and misidentified leptons, photons, or E_T .

Multi-Lepton + Photon Events, $\mathcal{L} = 929 \text{ pb}^{-1}$			
SM Source	$ee\gamma$	$\mu\mu\gamma$	$(ee + \mu\mu)\gamma$
Z/γ^*	37.85 ± 4.65	25.55 ± 2.88	63.40 ± 7.48
$Z/\gamma^* + \gamma\gamma$	0.72 ± 0.09	0.40 ± 0.05	1.12 ± 0.13
$W^\pm\gamma\gamma$	0.016 ± 0.004	$0.0^{+0.001}_{-0.0}$	0.016 ± 0.004
$Z/\gamma^* + \text{Jet faking } \gamma$	$0.0^{+1.2}_{-0.0}$	$0.0^{+1.1}_{-0.0}$	$0.0^{+1.6}_{-0.0}$
$\ell\ell e, e \rightarrow \gamma$	0.38 ± 0.11	0.16 ± 0.07	0.54 ± 0.13
QCD (Jets faking $\ell + E_T$)	$0.0^{+0.2}_{-0.0}$	$0.0^{+0.1}_{-0.0}$	$0.0^{+0.2}_{-0.0}$
DIF (Decays-In-Flight)	—	$0.0^{+0.2}_{-0.0}$	$0.0^{+0.2}_{-0.0}$
Total SM			
Prediction	39.0 ± 4.8	26.1 ± 3.1	65.1 ± 7.7
Observed in Data	53	21	74

TABLE III: A comparison of the numbers of events predicted by the SM and the observations for the $e\mu\gamma$ signature. The SM predictions are dominated by $Z\gamma$ production [35–37]. Other contributions come from $W\gamma$, $Z\gamma\gamma$, $W\gamma\gamma$, and misidentified leptons, photons, or E_T .

$e\mu + \text{Photon Events, } \mathcal{L} = 929 \text{ pb}^{-1}$	
SM Source	$e\mu\gamma + X$
$Z/\gamma^* + \gamma$	0.66 ± 0.09
$W^\pm\gamma$	$0.10^{+0.18}_{-0.10}$
$Z\gamma\gamma$	0.06 ± 0.01
$W\gamma\gamma$	0.011 ± 0.003
$e\mu j, j \rightarrow \gamma$	0.05 ± 0.01
$ee\mu, e \rightarrow \gamma$	0.06 ± 0.05
$W^\pm\gamma, Z/\gamma^* + \gamma \rightarrow \tau\gamma$	$0.09^{+0.18}_{-0.09}$
Total SM	
Prediction	1.0 ± 0.3
Observed in Data	0